REMARKS

Claims 1-33 are all the claims presently pending in the application. Claims 14-19 are amended. The listing of specific applications added into independent claim 14 is supported in the specification at lines 1-3 of page 2 and at lines 1-2 of page 37.

It is noted that the claim amendments, if any, are made only for more particularly pointing out the invention, and <u>not</u> for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-33 stand rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter. Claims 1-9 and 12-33 stand rejected under 35 U.S.C. § 102(b) as anticipated by Chan, et al., "Distributed Data Mining in Credit Card Fraud Detection." Claims 10 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Chan, further in view of Stolfo, et al., "JAM: Java Agents for Meta-Learning over Distributed Databases."

These rejections are respectfully traversed in the following discussion.

I.   **THE CLAIMED INVENTION**

The claimed invention, as exemplarily defined in independent claim 1, is directed to a method of processing an inductive learning model for a dataset of examples. The dataset is divided into a plurality of subsets of data. An estimated learning model for the dataset is then developed by developing a learning model for a first subset of the plurality of subsets.

Conventional methods, as described at line 21 of page 3 through line 6 of page 4, of learning model methods for a database require that the entire database be evaluated before the effects of hypothetical parameters for a test model are known. This process can take many hours (or days) and be costly, so that it can be prohibitive to spend so much effort in the development of an optimal model to perform the intended task.

In contrast, the present invention provides a method to develop an inductive learning model in much shorter time, including an estimate of the accuracy of the model as currently developed and an estimated cost to develop a complete model of the entire database.

II.   THE 35 USC §101 REJECTION

Claims 1-33 stand rejected under 35 USC §101 as allegedly directed to non-statutory subject matter.

In response to the Examiner's contention that, relative to claims 14-19 and citing paragraph [0206], "the specification defines signal bearing media as 'including transmission media", Applicants again bring to the Examiner's attention that this rejection is clearly based upon improperly taking words out-of-context. The entirety of this paragraph reads as follows:

"[0206] *Whether contained in the diskette 1300, the computer/CPU 1211, or elsewhere, the <u>instructions may be stored</u> on a variety of machine-readable data <u>storage media</u>, such as DASD storage (e.g., a conventional "hard drive" or a RAID array), magnetic tape, electronic read-only memory (e.g., ROM, EPROM, or EEPROM), an optical storage device (e.g. CD-ROM, WORM, DVD, digital optical tape, etc.), paper "punch" cards, or other <u>suitable</u> signal-bearing media including transmission media such as digital and analog and communication links and wireless. In an illustrative embodiment of the invention, the machine-readable instructions may comprise software object code.*" (emphasis by Applicants)

Therefore, contrary to the Examiner's interpretation and, as is well known in the art, "transmission media" does indeed include communication links and wireless devices that have memory devices fully <u>suitable</u> for <u>storage of the instructions</u>, whether prior to transmission, during transmission, or following transmission. Moreover, these transmission memory devices could well be storing the instructions in either digital or analog. This Examiner, along with various others, has improperly attempted to take a few words out of the full context in this paragraph to arrive at an interpretation that has no basis on engineering reality.

That is, to the extent that the Examiner is correct that "Transmission media such as digital and analog communications are unable to store instruction….", this "transmission media" is simply not what paragraph [0206] is describing, since this paragraph is clearly describing transmission media that is suitable for storage of instructions.

However, in an attempt to expedite prosecution, Applicants have added the word "storage" to claims 14-19 to preclude the Examiner's out-of-context interpretation.

Relative to the Examiner's concerns for the second aspect of the statutory subject matter,

the method of the present invention clearly applies for any database having information content such that it can serve as a database for training. Not all databases would have such information content and any specific database may have content for training in one aspect but not another aspect.

Applicants' previous comments concerning "abstraction" and "mathematical algorithm" are not repeated in this response. The claimed invention is clearly <u>not</u> an abstract idea and, to the extent that mathematics is involved in the method of the present invention, it is clearly a practical application of any such mathematics. Moreover, the method of the present invention clearly passes the "useful, concrete and tangible result" confirmed in *State Street* and *AT&T*.

However, in an attempt to expedite prosecution, claim 14 has been amended to list specific applications mentioned in the specification.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III.   THE PRIOR ART REJECTIONS

The Examiner alleges that newly-cited Chan anticipates the present invention as described in claims 1-9 and 12-33 and, when modified by newly-cited Stolfo, renders obvious claims 10 and 11.

Applicants continue to respectfully disagree.

In the final subparagraph of paragraph 8 (on page 25 of the Office Action), the Examiner alleges that "*There is no mention of 'subsets as incremental estimates of the learning model of the entire data set' within the claims.*"

In response, Applicants bring to the Examiner's attention that independent claim 1 clearly describes "... *developing an <u>estimated learning model for said dataset</u> by developing a learning model for a <u>first subset</u> of said plurality of subsets*", which is the first incremental estimate. Dependent claim 2 clearly describes: "... *<u>progressively forming an ensemble model of said dataset by sequentially developing a learning model for each of a successive one of said plurality of subsets</u>, until a desired indication of termination has been reached*", which is the subsequent incremental estimates.

As clearly described in the summary on the bottom section of page 68, Chan is clearly directed to a method of data mining a large data set by dividing the data into subsets, data mining each subset in parallel, and then combining the results as a "metaclassifier."

This concept is entirely different from the claimed invention. Even if the "data mining" or Chan were to be considered equivalent to developing a learning model (which it is not), the processing in Chan is merely that of providing a parallel processing of the entire data by dividing the data into subsets and processing these subsets in parallel as a data mining processing. The results of the parallel processing for all the subsets is then combined to provide a data mining processing for the entire data set.

In contrast to the claimed invention, in Chan there is no suggestion to use these subsets as incremental estimates of the learning model of the entire data set. Rather, in Chan, the whole goal is to arrive at a metaclassifier that represents the data mining result of all of the data mining processing for all of the subsets. Secondary reference Stolfo is not relied upon to overcome this fundamental deficiency of Chan and does not provide a remedy for this fundamental deficiency.

Thus, turning to the clear language of the claims, in Chan there is no teaching or suggestion of: "A method of processing an inductive learning model for a dataset of examples, said method comprising: dividing said dataset into a plurality of subsets of data; and developing an estimated learning model for said dataset by developing a learning model for a first subset of said plurality of subsets", as required by independent claim 1. The remaining in

Therefore, Applicants submit that all claims are clearly patentable over Chan.

Relative to the rejection for claims 10 and 11, wherein the Examiner urges to combine newly-cited Stolfo with Chan, Applicants respectfully submit that, even if combined, the combination would still not overcome the fundamental deficiency identified above that Chan is directed to an entirely different processing of data mining as a parallel data mining processing and has nothing to do with an incremental estimation of the model that would be ultimately developed if the entire data set were to be processed.

In view of the above, Applicants respectfully submit that the present invention contains aspects that are not present in the prior art of record, and the Examiner is, therefore, respectfully requested to reconsider and withdraw this rejection.

IV.   FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-33, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance.   The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

Date: ___October 16, 2008___   _____
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